



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

August 29, 2007

MEMORANDUM

SUBJECT: Effects Determinations for Atrazine Relative to the Topeka Shiner

FROM: Anita Pease, Senior Biologist /original signed 8/29/07/  
ERB IV  
Environmental Fate and Effects Division

TO: Arthur-Jean B. Williams, Acting Division Director  
Environmental Fate and Effects Division

Attached is the assessment of potential direct and indirect effects to the Topeka shiner and its designated critical habitat from uses of the herbicide atrazine. While the Endangered Species Act requires we assess uses of pesticides relative to any potentially affected listed species, this assessment focuses only on the Topeka shiner and its designated critical habitat, addressing provisions of a settlement agreement entered into by the federal government to resolve claims made by plaintiffs against EPA in a court case (NRDC v. EPA<sup>1</sup>).

The attached assessment was conducted using methodology consistent with the Agency's Overview Document<sup>2</sup>. Effects determinations for this assessment are summarized below:

- A "no effect" determination was made for direct acute effects
- A "not likely to adversely affect" (NLAA) determination was made for the Topeka shiner based on the following endpoints:
  - Reduced abundance of invertebrate food source
  - Reduced abundance of fish that provide spawning habitat or that may serve as food for the Topeka shiner
- A likely to adversely affect ("LAA") determination was concluded for the Topeka shiner based on the following endpoints:
  - Direct chronic effects
  - Indirect effects resulting from potential effects to aquatic plants

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<sup>1</sup> Settlement agreement of March 28, 2006: Natural Resources Defense Council v. United States Environmental Protection Agency. Civ. No: 03-CV-02444 RDB.

<sup>2</sup> Overview of the Ecological Risk Assessment: Process in the Office of Pesticide Programs, U.S. Environmental Protection Agency: Endangered and Threatened Species Effects Determinations: January 23, 2004.

- Indirect effects resulting from potential effects to terrestrial plants
- Adverse modification to designated critical habitat PCEs associated with water quality parameters that are linked to abundance of aquatic or terrestrial plants

As required by the Alternative Consultation Agreement EPA entered into with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services), I have been trained by the Services to make such determinations. Additionally, this assessment was subjected to internal Agency peer review throughout its development.

Please let me know if you have any questions regarding this assessment and effects determination for atrazine relative to the Topeka shiner and its designated critical habitat.

cc: Steven Bradbury  
Debbie Edwards

Attachments